

Clmpto  
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~~Please cancel claims 1-24, without prejudice or disclaimer.~~

~~Please cancel claims 25-35 and 37, without prejudice or  
disclaimer.~~

~~Please amend claims 36 and 38 as follows:~~

1 36. An optical recording /reproducing apparatus for recording, reproducing or erasing an information signal onto any one of N types (where  $N \geq 2$ ) of optical discs having layers of different thicknesses, each type of said optical discs having at least said first layer being transparent and a second layer for storing information, said apparatus comprising a converging means having different numerical apertures for converging a light flux on said second layer of corresponding ones of said N types of optical discs,

wherein said converging means converges said light as a spot with a smaller diameter D and performs aberration correction at said spot by employing a larger one of said numerical apertures, with respect to one of said optical discs having a thinner one of said first layers, and

wherein a thickness of each of said first layers of said N types of optical discs is about 1.2mm or less.

1 38. An optical recording /reproducing system comprising:

(a) an optical recording/reproducing apparatus for recording, reproducing or erasing an information signal onto/from any one of N types (where  $N \geq 2$ ) of optical discs having first layers of different thicknesses, each type of said optical discs having at least said first layer being transparent and a second layer for storing information, said apparatus comprising:

photo detecting means for detecting reflective lig  
said optical discs; and

a converging means having different numerical aper  
for converging a light flux on said second layer of  
corresponding ones of said N types of optical discs,

wherein said converging means converges said light  
as a spot with a smaller diameter D and performs aberrat  
correction at said spot by employing a larger one of sai  
numerical apertures, with respect to one of said optical  
having a thinner one of said first layers, and

wherein thicknesses of said first layers of said N  
of optical discs are about 1.2mm or less than 1.2mm,

(b) a signal processing means, responsive to one  
a reproduction signal, corresponding to said information  
signal, from said photo detecting means and (ii) receipt  
recording data, corresponding to said information signal  
recording on said disk, for generating an output signal  
corresponding to said information signal for performing  
a reproducing operation and a recording operation; and

(c) a system controlling means coupled to said sig  
processing means for controlling generation of the outpu  
signal of said signal processing means.

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Please add the following new claims 39-45:

39. An optical recording/reproducing apparatus according to claim 36, wherein each of said first layers comprises a transparent substrate.

40. An optical recording/reproducing system according to claim 38, wherein each of said first layers comprises a transparent substrate.

41. An optical recording/reproducing apparatus for recording, reproducing or erasing an information signal onto any one of N types (where  $N \geq 2$ ) of optical discs having layers of different thicknesses, each type of said optical discs having at least said first layer being transparent and a layer for storing information, said apparatus comprising:

a converging optical system including a first converging means comprising a first numerical aperture and a second converging means comprising a second numerical aperture, a converging optical system for converging, by employing said first converging means and said second converging means, a light flux on said second layer of one of said N types of optical discs, said first numerical aperture and said second numerical aperture being different from each other,

wherein said one of said first converging means and said second converging means employed by said converging system converges said light flux as a spot with a diameter D and performs aberration correction at said spot.

employing a larger one of said numerical apertures, w  
to one of said optical discs having a thinner one of  
layers, and

wherein a thickness of each of said first layer  
N types of optical discs is about 1.2mm or less.

42. An optical recording/reproducing apparatus a  
claim 41, herein each of said first layers c  
transparent substrate.

43. An optical recording/reproducing system co  
(a) an optical recording/reproducing app  
recording, reproducing or erasing an information signs  
any one of N types (where  $N \geq 2$ ) of optical discs h  
layers of different thicknesses, each type of said op  
having at least said first layer being transparent a  
layer for storing information, said apparatus compri  
photo detecting means for detecting reflective  
said optical discs; and

a converging optical system including a first  
means comprising a first numerical aperture and  
converging means comprising a second numerical ape  
converging optical system for converging, by employ  
said first converging means and said second convergi  
light flux on said second layer of one of said N types

discs, said first numerical aperture and said second numerical aperture being different from each other,

wherein said one of said first converging means and second converging means employed by said converging optical system converges said light flux as a spot with a small diameter D and performs aberration correction at said spot employing a larger one of said numerical apertures, with respect to one of said optical discs having a thinner one of said layers, and

wherein a thickness of each of said first layers of said N types of optical discs is about 1.2mm or less;

(b) a signal processing means, responsive to one of reproduction signal, corresponding to said information signal from said photo detecting means and (ii) receipt of recorded data, corresponding to said information signal, for recording on said disk, for generating an output signal corresponding to information signal for performing one of a reproducing operation and a recording operation; and

(c) a system controlling means coupled to said signal processing means for controlling generation of the output signal of said signal processing means.

44. An optical recording/reproducing system according to claim 43, wherein each of said first layers comprise a transparent substrate.

45. A system comprising:

(a) an optical recording/reproducing apparatus for recording, reproducing or erasing an information signal onto, any one of N types (where  $N \geq 2$ ) of optical discs having a  
layer of different thicknesses, each type of said optical disc  
having at least said first layer being transparent and a second  
layer for storing information, said apparatus comprising:

photo detecting means for detecting reflective light from  
said optical discs; and  
a converging means having different numerical apertures  
converging a light flux on said second layer of corresponding  
ones of said N types of optical discs,

wherein said converging means converges said light flux on  
a spot with a smaller diameter D and performs aberration  
correction at said spot by employing a larger one of  
numerical apertures, with respect to one of said optical discs  
having a thinner one of said first layers, and

wherein thicknesses of said first layers of said N types of  
optical discs are about 1.2mm or less than 1.2mm,

(b) a signal processing apparatus including:

signal processing means, responsive to one of (i) a reproduction signal, corresponding to said information signal from said photo detecting means and (ii) receipt of recorded data, corresponding to said information signal, for recording on said disk, for generating an output signal corresponding to said information signal for performing one of a reproduction operation and a recording operation on said discs; and

(c) a system controlling means coupled to said signal processing means for controlling generation of the output signal of said signal processing means.

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